REMARKS

Reconsideration of this Application is respectfully requested in view of the foregoing amendment and the following remarks. Claims 16-21, 25-40, 42, 44, 46-56, 58, and 60-63 were pending in this Application. Claim 49 has been amended, and withdrawn claims 27-34 have been canceled without prejudice to or disclaimer of the underlying subject matter. Accordingly, claims 16-21, 25-26, 35-40, 42, 44, 46-56, 58, and 60-63 are presently under examination. Support for the amendments may be found, for example, in the original claims, and in the specification at page 30, line 9 through page 31, line 8. No new matter has been introduced by any of the requested amendments. For the reasons set forth below, Applicants respectfully submit that all claims pending herein are in condition for Allowance.

In the Office Action:

- Claims 36, 42, 47 and 48 were objected to as being in improper dependent form.

- Claims 16-21, 35-36, 39-40, 42, 49, 52-54, 58, 61 and 63 were rejected under 35 U.S.C. §103(a) as being unpatentable for obviousness over Kenner et al. (U.S. Patent 6,112,239; hereinafter "Kenner") in view of Haeri et al. (U.S. Patent 6,604,241; hereinafter "Haeri").

- Claims 25-26, 37-38 and 50-51 were rejected under 35 U.S.C. §103(a) as being unpatentable for obviousness over Kenner and Haeri in further view of Rakib et al. (U.S. Patent 6,889,385; hereinafter "Rakib").

- Claims 44, 46-47, 60 and 62 were rejected under 35 U.S.C. §103(a) as being unpatentable for obviousness over Kenner and Haeri in view of Nobakht et al. (U.S. Patent 6,813,639; hereinafter "Nobakht").

- Claims 48 and 56 were rejected under 35 U.S.C. §103(a) as being unpatentable for obviousness over Kenner and Haeri in view of Nakamura et al. (U.S. Patent 5,913,039; hereinafter "Nakamura").

- Claim 55 is rejected under 35 U.S.C. §103(a) as being unpatentable for obviousness over Kenner and Haeri in view of Pecus et al. (US 6,886,029; hereinafter "Pecus").

Applicants respectfully traverse these rejections, for the reasons set forth below.

The Claim Objections

Claims 36, 42, 47 and 48 were objected to under 37 C.F.R. §1.75(c), as allegedly being in improper dependent form for failing to further limit the subject matter of a previous claim. In particular, the Office objects to the claim language "adapted to", and argues that a claim containing such language, e.g., a processor further adapted to insert the second dynamic network information table in a second transport stream (as in claim 36), does not further limit the claims. Applicants respectfully traverse, and request reconsideration.

The "adapted to" language contained in claims 36, 42, 47 and 48 is functional language. Functional language is expressly permitted in claims. *See, e.g.*, MPEP § 2173.05(g) which states (emphasis added):

> A functional limitation is an attempt to define something by what it does, rather than by what it is (e.g., as evidenced by its specific structure or specific ingredients). *There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper. In re Swinehart*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971).
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> *A functional limitation must be evaluated and considered, just like any other limitation of the claim*, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. A functional limitation is often used in association with an element, ingredient, or step of a process to define a particular capability or purpose that is served by the recited element, ingredient or step.

In this same section of the MPEP, one of the case examples provided is of a claim containing "adapted to" language, *i.e.*:

> In a claim that was directed to a kit of component parts capable of being assembled, the Court held that limitations such as "members adapted to be

positioned" and "portions . . . being resiliently dilatable whereby said housing may be slidably positioned" serve to precisely define present structural attributes of interrelated component parts of the claimed assembly. *In re Venezia*, 530 F.2d 956, 189 USPQ 149 (CCPA 1976).

MPEP § 2173.05(g). Accordingly, Applicants submit that the "adapted to" language in claims 36, 42, 47 and 48, just like the "adapted to" language in the exemplified *Venezia* case, is a proper claim limitation.

In addition to this explanation in the MPEP, the patent jurisprudence makes it clear that **functional claim limitations are in fact claim limitations that must be evaluated and considered**. *See, e.g., Microprocessor Enhancement v. Texas Instruments*, 520 F.3d 1367, 1375 (Fed. Cir. 2008) ("Functional language may also be employed to limit the claims"); *Acco Brands, Inc. v. Micro Security Devices, Inc.*, 346 F.3d 1075, 1078, 68 U.S.P.Q.2d 1526, 1528 (Fed. Cir. 2003) ("the phrase 'for extending' is a functional restriction on the claim"); *K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1363, 52 U.S.P.Q.2d 1001, 1004 (Fed. Cir. 1999) ("The functional language is, of course, an additional limitation in the claims.").

Reconsideration and withdrawal of the objection is therefore respectfully requested.

Obviousness Rejection over Kenner in view of Haeri

Claims 16-21, 35-36, 39-40, 42, 49, 52-54, 58, 61 and 63 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Kenner in view of Haeri. To the extent this rejection might still be applied to claims presently pending in this Application, it is respectfully traversed, and reconsideration is requested.

The Office contends that Kenner teaches, at columns 16-17, a dynamic network information table including an upstream subtable. Office Action at page 3. The Office further contends that Kenner teaches an "upstream subtable including information associated with transmission characteristics of one or more devices positioned in the digital subscriber network upstream with respect to the first device." *Id.* at pages 3-4. Applicants respectfully disagree.

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Kenner fails to teach or suggest the claimed invention. The presently claimed invention recites methods and systems for transmitting and/or receiving a *dynamic* network information table (DNIT) in a digital network, such as a digital subscriber network or a digital broadband delivery system, wherein the dynamic network information table includes: (a) *information associated with* transmission characteristics of *a first device* and *one or more devices positioned upstream* with respect to the first device (claims 16-21 and 25-26); or (b) *information related to* an identifier corresponding to *an upstream device* (claims 35-40, 42, 44, 46-56, 58, and 60-63). *See also* Application at page 32, line 26 through page 34, line 21.

As an initial matter, the Office Action does not sufficiently disclose how the elements of the claims are met, e.g., it is not explained which elements of Kenner correspond to the claimed receiver, first device, or one or more upstream devices. Paramount to any grounds of rejection is an explanation of how the elements of the claim are described by a cited reference, but such explanation has not been provided with respect to each element of the claims. This defect is particularly pertinent to independent claims 35 and 49, and their respective dependents, because these claims were summarily rejected on page 6 of the Office Action "for similar reasons as stated above [with respect to claim 16]" although these claims contain limitations different from or additional to those of claim 16. Thus, the Office's rejection is deficient because it fails to contain *any* explanation of how the art allegedly renders claims 35 and 49 obvious.

Kenner does not teach the claimed dynamic network information table, either in the cited columns or elsewhere. Kenner teaches that a "correlation can be drawn between a user's IP address and a delivery site that offers better data delivery performance", and that the "correlated data is used to produce a look-up table", at col. 16, lines 37-41. In particular, Kenner teaches that the "look-up table is formed comprising a list of first-byte IP addresses numbering 0-255, and for each address, a list of delivery sites providing improved performance for users having corresponding IP addresses", at col. 17, lines 24-28, and that upon a user request, a "redirection server analyzes the user's IP address and examines the list of potential delivery sites on the look-up table to determine what delivery site or sites are correlated with the user's IP address", at col.

18, lines 20-23. The system of Kenner may also "subdivide[] the look-up table into smaller sublists with a given range of addresses" and "download (step 142) to the user a small file containing the sublist", at col. 18, line 62 through col. 19, line 1.

The Office appears to equate the IP address look-up table of Kenner with the claimed dynamic network information table including an upstream subtable. In order for these grounds of rejection to apply to each and every element of claim 16, the IP address look-up table of Kenner must be dynamic, and must contain information associated with transmission characteristics of the first device, i.e., the device from which it is sent (MSP **32**), as well as information associated with transmission characteristics of one or more devices positioned upstream to the MSP **32**.

Kenner, however, does not disclose these features. First, Kenner's teaching of a _static_ look-up table correlating IP addresses with preferred delivery sites is not a teaching or suggestion of a _dynamic_ table, as required by all of the claims under examination. Second, Kenner's look-up table fails to include any information about devices positioned _upstream_ to the delivery sites, and thus fails to teach or suggest a dynamic table including _information associated with_ transmission characteristics of _one or more devices positioned upstream_ with respect to the first device, as required by claim 16 and its dependent claims. Third, Kenner fails to teach a method or system wherein a dynamic table including information related to an upstream device is transmitted to a device or apparatus, which _adds information relating to itself before passing the table with the added information downstream_, as required by claims 35 and 49, and their respective dependent claims. Therefore, Kenner fails to teach the dynamic network information table limitation of the claimed invention.

Haeri fails to supplement these deficiencies and similarly does not disclose, teach or suggest these features. As an initial matter, the Office does not sufficiently disclose how the elements of the claims are met, e.g., it is not explained which elements of Haeri correspond to the claimed receiver, first device, or one or more upstream devices. Haeri discusses communicating network information using protocols based on Universal Resource Locators

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(URLs), including the use of EIGRP (Enhanced Interior Gateway Routing Protocol) with URLs. *See* Haeri at col. 14 line 64 through col. 16 line 36. The Office argues that the "get" command to obtain a routing table entry discussed at col. 15 of Haeri somehow correlates with the claimed dynamic network information table, but this argument is not supported by Haeri's disclosure and in fact is contradicted by the nature of EIGRP itself.

The claimed invention requires that a dynamic network information table is passed from a first upstream device or devices to a downstream receiver, with the first device adding information relating to itself before passing the table downstream. EIGRP does not involve such dynamic network information tables. EIGRP is a distance-vector routing protocol, in which an individual router knows only what its neighbors know about the overall network. It is therefore fundamentally different from the claimed invention, where network information is *dynamically propagated* throughout the network, and a downstream device is made aware of the entire upstream network topology through the passage of a dynamic network information table.

Moreover, even if a router in Haeri is able to obtain routing information from its neighbor via a "get" request, there is no teaching or suggestion in Haeri that the routing information is *dynamic*, or that it includes information about devices positioned *upstream* to a delivery site. There is no teaching or suggestion that the routing table of Haeri includes *information associated with* transmission characteristics of *one or more devices positioned upstream* with respect to the first device as required by claim 16, or that a device or apparatus receives a dynamic network information table from an upstream device and then *adds information relating to itself before passing the table with the added information downstream*, as required by claims 35 and 49.

For the reasons stated above, Haeri does not compensate for the deficiencies of Kenner. The cited references taken alone or in combination do not teach, suggest, or make obvious the dynamic network information table limitation of the present invention, and Applicants respectfully request that the rejection be withdrawn.

Obviousness Rejection over Kenner and Haeri in view of Rakib

Claims 25-26, 37-38 and 50-51 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Kenner and Haeri in view of Rakib. To the extent this rejection might still be applied to claims presently pending in this Application, it is respectfully traversed, and reconsideration is requested.

Applicants respectfully disagree. As previously discussed, Kenner and Haeri are deficient as primary references, because they fail to teach or suggest each and every limitation of the independent claims, either alone or combined. Neither Kenner and Haeri teach or suggest a dynamic network information table as claimed in the present invention. With respect to the dynamic network information table limitation of each of claims 25-26, 37-38 and 50-51 (or their respective independent claims), the Office contends that Rakib teaches at col. 10 line 23 through col. 11 line 11 a dynamic network information table. Office Action at page 7. Applicants respectfully disagree, because Rakib's alleged teachings fail to supplement the deficiencies of Kenner and Haeri as primary references, for at least the following reasons.

As an initial matter, the Office Action does not sufficiently disclose how the elements of the claims are met, e.g., it is not explained which elements of Kenner, Haeri or Rakib correspond to the claimed receiver, first device, or one or more upstream devices. Presumably the Office is still relying its contention from the previous Action that the "menu" discussed at col. 9 line 41 through col. 10 line 22 of Rakib corresponds to the claimed dynamic network information table, however, Rakib fails to teach or suggest the claimed dynamic network information table, either in the cited columns or elsewhere. Rakib teaches "a menu to users of video programs, multimedia files, telephony services or wideband internet access or other wideband services which are available for selection by the user", at col. 9, lines 50-55. This "menu" is *not dynamic*, nor does it contain *information about network devices*, as described and claimed in the present Application. Instead, Rakib teaches a menu containing information about *programs and services*, not devices. Rakib also fails to teach the transmission and/or receipt of any information

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related to network devices, let alone the transmission characteristics of a device or an identifier corresponding to an upstream device.

Moreover, nowhere in Rakib is it specified that the menu is _dynamic_. In the absence of any information about how the menu is presented to users, it is improper to conclude that Rakib teaches a _dynamic_ menu, because a dynamic menu is not necessary to the operation of Rakib's system. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic _necessarily_ flows from the teachings of the applied prior art." _Ex parte Levy_, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original), cited in MPEP § 2112 part IV. No such showing has been made here. Therefore, Rakib fails to teach the dynamic network information table limitation of claims 25-26, 37-38 and 50-51 (or their respective independent claims).

Rakib also fails to teach or suggest a dynamic network information table including a device-specific subtable including information associated with transmission characteristics of the first device, as required by claims 25-26 (via their ultimate dependency on claim 16). The Office's comparison of the "PID" of Rakib to the claimed device-specific subtable fails, for the following reasons. Claim 16 and its dependent claims require the _receiver_ (which also transmits requests for service) _to receive a device-specific subtable including information associated with_ transmission characteristics of _devices_ located upstream of the receiver. Rakib's Program Identifier Code (PID), however, is _not received by the receiver_ from an upstream first device, and it does not include information about _devices_. Instead, Rakib teaches that the "cherry picker 10 also has an input ... for receiving upstream program and/or service requests from the users [and it] converts these requests for programs and services to program identifier codes (PIDs), IP source addresses or other identifying codes that can be used to cull out the data packets in the input streams that encode the requested programs and/or services", at col. 9, lines 32-67. Thus, not only does the PID of Rakib identify programs or services, not devices, but it is never sent to

the receiver (e.g., the user's settop decoder). Therefore, Rakib fails to teach or suggest the device-specific subtable limitation of claims 25-26.

Rakib further fails to teach or suggest either a second dynamic network information table, as required by claims 37-38 (via their ultimate dependency on claims 35 and 36), or a device that modifies a dynamic network information table by adding information relating to itself before passing the table with the added information downstream as required by claims 50-51 (via their ultimate dependency on claim 49). As described above, the menu of Rakib is neither *dynamic* nor *contains information about network devices*, let alone upstream network devices. Rakib's menu is merely a *listing of programs*, e.g., pay-per view television programs. Rakib also fails to teach or suggest creating or transmitting a *second* dynamic network information table, or inserting information specific to *any* device, let alone the claimed first device, into a second transport stream, either with or without the network information from the first dynamic network information table (the menu). Further, the multiplexer **10** *never receives a menu*, let alone a menu containing network information related to an identifier corresponding to an upstream device. Thus, because Rakib does not teach or suggest the claimed apparatus, second dynamic network information table, or the second transport stream, Rakib fails to teach or suggest the transport stream related limitations of claims 37-38 and 50-51.

Hence, the cited references taken alone or in combination do not teach, suggest, or make obvious the present invention, and Applicants respectfully request that the rejection be withdrawn.

Obviousness Rejection over Kenner and Haeri in view of Nobakht

Claims 44, 46-47, 60 and 62 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Kenner and Haeri in view of Nobakht. To the extent this rejection might still be applied to claims presently pending in this Application, it is respectfully traversed, and reconsideration is requested.

As previously discussed, Kenner and Haeri are deficient as primary references, because they fail to teach or suggest each and every limitation of the independent claims, either alone or

combined. Neither Kenner and Haeri teach or suggest a dynamic network information table as claimed in the present invention. Nobakht's alleged teaching of including network information in a program association table fails to supplement the deficiencies of Kenner and Haeri as primary references. Hence, the cited references taken alone or in combination do not teach, suggest, or make obvious the present invention, and Applicants respectfully request that the rejection be withdrawn.

Obviousness Rejection over Kenner and Haeri in view of Nakamura

Claims 48 and 56 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Kenner and Haeri in view of Nakamura. To the extent this rejection might still be applied to claims presently pending in this Application, it is respectfully traversed, and reconsideration is requested.

As previously discussed, Kenner and Haeri are deficient as primary references, because they fail to teach or suggest each and every limitation of the independent claims, either alone or combined. Neither Kenner and Haeri teach or suggest a dynamic network information table as claimed in the present invention. Nakamura's alleged teaching of a processor adapted to generate alert messages fails to supplement the deficiencies of Kenner and Haeri as primary references. Hence, the cited references taken alone or in combination do not teach, suggest, or make obvious the present invention, and Applicants respectfully request that the rejection be withdrawn.

Obviousness Rejection over Kenner and Haeri in view of Pecus

Claim 55 was rejected under 35 U.S.C. § 103(a) as allegedly obvious over Kenner and Haeri in view of Pecus. To the extent this rejection might still be applied to claims presently pending in this Application, it is respectfully traversed, and reconsideration is requested.

As previously discussed, Kenner and Haeri are deficient as primary references, because they fail to teach or suggest each and every limitation of the independent claims, either alone or combined. Neither Kenner and Haeri teach or suggest a dynamic network information table as

claimed in the present invention. Pecus' alleged teaching of bit error information fails to supplement the deficiencies of Kenner and Haeri as primary references. Hence, the cited references taken alone or in combination do not teach, suggest, or make obvious the present invention, and Applicants respectfully request that the rejection be withdrawn.

In view of the foregoing, all of the claims in this case are believed to be in condition for allowance. Should the Examiner have any questions or determine that any further action is desirable to place this Application in even better condition for issue, the Examiner is encouraged to telephone Applicants' undersigned representative.

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